**Export/sampling permits**

Please note an export permit must be linked to an objectthat has to be created on SAHRIS! If the object you want to work on has not been created yet, you would need to **create an ObjectID**.

Required documents:

* For export of material from KZN, Eastern Cape or Western Cape that involves destructive analysis, the **destructive sampling permit** from the respective Heritage Authority must be submitted;
* A consent letter from the accessioning institution.

The proposal should include (you can fill these in below):

* a list of participants (name, affiliation, phone no, email addresses) and how they are involved;
* the name and address of the facility, including address, it is being analysed at;
* name and address of the museum/university department that currently hosts the object;
* names of the responsible person(s) during transport and while the fossil is at the facility;
* the period/time frame during which the fossil(s) will be outside the country;
* detailed information on the fossil(s), especially as it is a "unique" specimen;
* detailed information on the research project behind it & methodology including expected outcomes (i.e., the reason for export);
* the written confirmation of the institution that currently hosts the object that the object may be used as proposed and be returned in good condition;
* should there be any damage/destructive analysis (e.g., coating for higher resolution) undertaken, this needs to be stated in detail;
* Statement why this study cannot be done in South Africa.

**Applicant (name and affiliation): this is usually the museum curator!**

Dr. Gerrit Dusseldorp

University of Johannesburg, and Leiden University

Faculty of Archaeology, Leiden University

2300RA, Leiden, the Netherlands

+31715272428

[g.l.dusseldorp@arch.leidenuniv.nl](mailto:g.l.dusseldorp@arch.leidenuniv.nl)

**Applied for (principal researcher):**

Irini Sifogeorgaki MSc

Faculty of Archaeology, Leiden University

2300 RA Leiden, The Netherlands

[e.sifogeorgakis@arch.leidenuniv.nl](mailto:e.sifogeorgakis@arch.leidenuniv.nl)

**Participants with affiliations, email addresses, phone numbers (& their role):**

1) Dr. Gerrit Dusseldorp

University of Johannesburg, and Leiden University

Faculty of Archaeology, Leiden University

2300RA, Leiden, the Netherlands

+31715272428

[g.l.dusseldorp@arch.leidenuniv.nl](mailto:g.l.dusseldorp@arch.leidenuniv.nl)

Role: Project leader

2) Irini Sifogeorgaki MSc

Faculty of Archaeology, Leiden University

2300 RA Leiden, The Netherlands

[e.sifogeorgakis@arch.leidenuniv.nl](mailto:e.sifogeorgakis@arch.leidenuniv.nl)

Role: Micromorphology analyst

3) Prof. Hans Huisman

State Heritage Agency of the Netherlands and Groningen University

Smallepad 5 3811 MG Amersfoort, the Netherlands

[h.huisman@cultureelerfgoed.nl](mailto:h.huisman@cultureelerfgoed.nl)

+31334217606

Role: micromorphology expert

The material will be **shipped as fragile luggage and hand carried** to the laboratory of the State Heritage Service in Amersfoort in August/September 2019 by by Dr. Dusseldorp and Ms Sifogeorgaki. Professor Huisman and Ms Sifogeorgaki will be involved with thin section preparation and analysis

**Institution incl. address that currently hosts the object:**

KwaZulu-Natal Museum  
237 Jabu Ndlovu Street

Pietermaritzburg South Africa

**Facility incl. address at which the experiment will be done:**

State Heritage Agency, the Netherlands

Smallepad 5

3811 MG Amersfoort, the Netherlands

Material Studies Laboratory

Faculty of Archaeology Leiden University

Einsteinweg 2 2300 RA Leiden, The Netherlands

**Table of objects or upload file:**

**Site including age at which object was found:**

Umhlatuzana rockshelter

The samples come from the Pleistocene part of the occupation sequence, from sediments between 40 and 70 000 years old.

**Time frame:**

Transport to State Heritage Agency (facility): September 2019

Return date: October 2022

**Aim/rationale:**

In July and August 2018, we commenced a geoarchaeological investigation of Umhlatuzana rockshelter with the aim to clarify some outstanding issues on the site’s stratigraphy. We have continued the investigation in the lower levels of the stratigraphy in July and August 2019. Over the past few weeks, we have excavated a small area of the site through the Howiesons Poort sediment (~60 000 years old). And we have reached bedrock in a small excavation area (0,25 m2).

The sediments are characterized by an extremely high find density. The rationale of our micromorphology analysis is to see if the sedimentation rate increases, if there are periods of increased occupation density or if some levels present lag deposits.

**Methodology (short):**

Micromorphology samples were taken from the stratigraphic profile either encased in plaster or in Kubiena tins. The samples will be dried and subsequently impregnated at the laboratory of the State Heritage Service of the Netherlands. From the impregnated blocks, thin sections will be produced for micromorphological analysis. The thin-sections will be analysed using a stereo-microscope under normal and cross-polarized light.

Complementary sediment samples were taken from the same stratigraphic units.

They will be used for pH, granulometry, magnetic susceptibility and loss of ignition analyses to provide information on the sediment properties that cannot be obtained from the micromorphology samples

**Confirmation/permit by museum (**Attached?):

Attached excavation permit and letter of support from KZN Museum

**Damage/destructive analysis? (if yes, explain in detail)**

The micromorphology samples will be used to produce thin sections this will involve the destruction of parts of the sample. The sample will also be impregnated in resin.

The sediment samples will among others be exposed to loss on ignition analysis, heating the samples to very high temperatures, which is destructive.

**Statement why this study cannot be done in South Africa:**

To the best of our knowledge there are no fully equipped micromorphological laboratories in South Africa. As impregnation and thin-section preparation is a very delicate process the preparation abroad it likely to yield the best results. The State Heritage Agency in the Netherlands has a state-of-the-art laboratory where all aspects of sample preparation and analysis can be undertaken.